PLAN Series™

PLAN File Server

Installation and Operation
Quick Reference Card

NESTAR

■ *FILE SERVER STARTUP*

FLOOR–STANDING model: Unlock hard disks. Key power on.
DESKTOP model: Switch power on.

If <Esc> is pressed, the Boot menu will appear:

- T – Boot from tape drive
- 1 – Boot from drive 1
- 2 – Boot from drive 2
- 3 – Boot from drive 3
- 4 – Boot from drive 4

Select tape or unit to boot from by pressing the appropriate key.
Otherwise, the file server will boot from drive 1.

If <Esc> is pressed, the Utilities menu will appear:

- a) file server
- b) partial tape dump/restore
- c) full tape dump/restore
- d) copy partial disk to disk
- e) copy full disk to disk
- f) power down disk drive(s)
- g) list disk contents
- h) examine/modify disk contents
- i) check/repair disk consistency
- j) format disk
- k) add or modify tape dump instruction files
- l) model on/off/setup

Select desired utility. Otherwise, the file server automatically
executes the file server program. See utilities section of this card.

■ *Console Switch Settings*

TRANSMIT DATA RATE	9600
RECEIVE DATA RATE	9600
STOP BITS	1
PARITY ENABLE	ON
PARITY SENSE	EVEN
DATA LENGTH	7
DUPLEX	FULL
EOM CHAR	CR
XON/OFF	ON
AUTO LF/CR	OFF

■ *Modem Switch Settings*

If the Hayes Smartmodem 1200 is used for file server access by a
remote terminal, set the modem switches as follows:

Modem at remote terminal		Modem connected to file server	
1	Down	1	Down
2	Up	2	Up
3	Down	3	Down
4	Up	4	Down
5	Up	5	Down
6	Down	6	Down
7	Up	7	Up
8	Down	8	Down

For modems other than the Hayes Smartmodem 1200:

    1200 baud
    Full duplex
    Autoanswer
    DTR not supported by file server

Other modem switch settings are irrelevant for network use and
should be set to meet local phone use requirements.

Perform remote diagnosis only with the assistance of a Nestar
Customer Support Representative.

◼ FILE SERVER CONSOLE COMMANDS

◼ Entering Commands

Enter the password if required (see below). The file server will respond with the prompt

    CMD>

after either the password is entered or the first character of a command is typed. Finish entering the command; follow it with <Return>. The system will execute the command and will print any error code and message on the screen. All network file server commands can be used at the system console except:

    BSAVE   BLOAD   BRUN   OFF

◼ Entering Passwords

If a password has been specified using the PASSWORD command, you must type

    <Esc> password <Return>

before EACH console command. The password will not appear on the screen. If the password sequence is entered incorrectly, press <Esc> to enter it again. Until the correct sequence is entered, the file server will continue to process network requests.

◼ Console Commands

CLEAR	clears console display.
DISPLAY ON/OFF	turns on or off display of system commands and messages. Default is OFF.
DISPLAY RECON ON/OFF	turns the lower right-hand display of network reconfiguration activity ("<beep> R") on or off.
MODEM ON/OFF	allows file server console commands and file server utilities to be used from a remote location. Default is OFF.
PASSWORD [pw]	sets password for console commands. To use, type PASSWORD and the desired password, and press <Return>. The default is no password.
QUIT	shuts down network file server program and displays file server utility menu.
SET TIME	sets the clock/calendar. For 1:30 a.m., July 3, 1984 type: 840703,0130.
SHOW ALL MOUNTS	displays all current mounts. Follow with CLEAR to rewrite screen.
SHOW TIME	displays current day and time in the format: 80, Day DD–Mon–19YY HH:MM:SS
SUPER cmd	overrides file server passwords on network volumes for current command only. Can be combined with $nn command in the order: $nn SUPER cmd.
$nn cmd	executes a command for network user station $nn. No local commands. Can be combined with SUPER in the order: $nn SUPER cmd.

FSCMD STARTUP COMMAND FILE

When the file server program starts up, any file server console commands found in the volume /MAIN/SYSTEM/FSCMD are executed. FSCMD is a Type = T (Text) volume. To place console commands in FSCMD for use at startup, use a text editor at a user workstation. You must choose an environment that supports the TCOPY utility program. Enter the desired console commands, one per line, into a text file in that environment.

Next, use the TCOPY utility to transfer the file of commands to /MAIN/SYSTEM/FSCMD, which is a Type = T (Text) volume.

All console commands can be used in FSCMD except SET TIME.

For security, protect /MAIN/SYSTEM/FSCMD with a password; else any user can determine its contents and find out console password.

RUN–TIME ERROR

If the file server detects a run-time error, the following message will be displayed:

```
***** SYSTEM ERROR *****
error type -------------
System stack is: nnnn
Hit return to reboot server...
```

If this should happen, contact your network service representative immediately. Also record the full contents of the file server's display screen for your service representative's use. Then reboot the file server and check the consistency of the disk before allowing the file server software to execute. See the File Server Installation and Operation Manual, Section 4.9.

■ FILE SERVER I/O AND DEVICE ERRORS

■ Hard Disk and Tape Errors

Disk error codes are reported in hexadecimal by the file server (the file server program and the various offline utilities). They consist of two parts: a Disk error code, and a device subcode, which is device dependent and describes the details of the error. See Appendix A of the PLAN Series File Server Installation and Operation Guide for error tables.

Upon discovery of a hard disk error, record both the error code and the subcode and contact your service representative immediately.

■ Errors While Booting the File Server

If a hardware error occurs during boot, an attempt is made to diagnose the problem and report it. The following is a list of the messages and their meanings.

Errors While Booting From Hard Disk

All errors that occur while booting from the hard disk are serious and should be reported to your service representative immediately.

Disk drive not attached to PIC.
Indicates the Peripheral Interface Card (usually in slot 3 of the card cage) is not communicating with the controller. Possible causes are a damaged PIC, cable or disk controller.

Drive Error when identifying drive. Code is $xx.
A hard disk error occurred while accessing the boot drive. See Section A.2.1 of the File Server Installation and Operation Manual for list of the error codes and their meanings.

Drive Error while reading boot volume. Code is $xx.
A hard disk error (error code xx) occurred while reading the boot volume //SYSTEM/FILESERVER. See Section A.2.1 of the File Server Installation and Operation Manual for a list of the error codes and their meanings.

PIC missing or not working.
Indicates the file server could not access the PIC (usually in slot 3 of the card cage). The PIC is not present in the machine or is not working.

Disk sector 0 is not initialized.
The disk does not have a directory structure placed upon it. Indicates corruption of the disk structure.

Disk boot volume pointer not set.
Indicates there is no boot volume set for this drive.

Errors While Booting From Server Diagnostic Tape

Tape is not a Server Diagnostic tape.
Indicates a tape of the wrong type was inserted in the drive. Only diagnostic boot tapes, not backup tapes, can be used to boot the server.

Server Diagnostic Tape must be Version 2.0 or later.
Indicates an attempt was made to boot from a tape older than the boot ROM.

Checksum error on Diagnostic tape.
Indicates an error while reading tape. Possible causes are a damaged tape or a defective drive or controller. Clean the tape head, tension the tape and try booting again.

Error during tape read. Result is $xx.
Indicates an error occurred while reading the boot tape. See Section A.2.1 of the File Server Installation and Operation Manual for a list of the error codes. Clean the tape head, tension the tape and try booting again.

FILE SERVER UTILITIES

How to Use

These OFFLINE utility programs can only be run on the file server and cannot be run while the file server program is operating. ONLINE utilities are executed at user stations while the file server is operating, and are documented in the File Server User Guides.

To execute utility programs, turn on the file server. Boot from the default disk or press any key, when prompted, to see the boot menu and boot from the disk (or tape, in an emergency) that you prefer. If a disk problem is suspected, do not boot from the disk to be examined. Reach the utility menu by pressing <Esc> when prompted.

From the utility menu, type the letter for the utility to be executed. Then supply information as requested.

Utilities

FILE SERVER
causes the file server software to execute the file server program.

PARTIAL TAPE DUMP/RESTORE
copies selected hard disk volumes to and from backup tape cartridges. (Tapes not compatible with FULL DUMP utility.)

FULL TAPE DUMP/RESTORE
copies all the volumes on a hard disk onto backup tape cartridges, and restores all copied volumes from tape to disk.

COPY PARTIAL DISK TO DISK
copies from one disk location to another. Structural changes in the hierarchy can be accomplished using this utility. To copy a single virtual volume, specify the full pathname for both SOURCE and TARGET virtual volumes. The directory structure being copied is merged into the existing file server directory structure; new directories and files will be added as needed. Access rights and passwords are copied intact with each volume.

COPY FULL DISK TO DISK
copies entire volumes of data between media that are of identical size. Copies the FULL hard disk; use the Copy Partial Disk Option to copy selected volumes. Destroys existing information on target disk. Target and source hard disks must be the same size. Prompts for target root directory name. It may be old target name, source name, or a new name. To ABORT, press <Esc><Return> whenever this utility requests a reply; or press <Esc> during copying process. **WARNING: If interrupted, target disk will not be usable until it is reformatted by FORMAT program or until it is the target of a successfully completed full disk copy.**

POWER DOWN DISK DRIVE(s)
sequences down a PLAN 4000 hard disk prior to turning off the disk. **Power down the disk before turning off the file server power.**

LIST DISK CONTENTS
creates a print server listing of some or all of the files on disks attached to the file server.

EXAMINE/MODIFY DISK CONTENTS
used for a variety of disk maintenance and diagnostic purposes. Input is prompted for via nested menus.

CHECK/REPAIR DISK CONSISTENCY
verifies the consistency of disk data structures and optionally repairs the data structures. Validates all control sectors, directory sectors, and freespace descriptors. Reports orphaned sectors and optionally adds them to freespace. Recovers lost freespace.

FORMAT DISK
offline utility initializes disk for use with the file server. Hard disks are shipped already formatted and should not be reformatted except under special circumstances.

ADD OR MODIFY TAPE DUMP INSTRUCTION FILES
allows predefining of Partial Tape Dump/Restore and Tape Dump/ Restore operations (used by the Partial Tape Dump/Restore utility.

MODEM ON/OFF/SETUP
allows use of a modem and remote console, for file server diagnostics via telephone.